Volume 160 1986

Contents

Letters to the Editor

The central star of NGC 2346: further photometric observations
Jasniewicz, G., Acker, A. L1

The radio continuum–far infrared correlation and magnetic fields in Sbc galaxies
Hummel, E. L4

The UV bright spot of water vapor in comets
Bertaux, J.L. L7

Observations of hydrogen cyanide in comet Halley
Despois, D., Crovisier, J., Bockelée-Morvan, D., Schraml, J., Forveille, T., Gérard, E. L11

The discovery of an interstellar $^{15}NH_3$ maser
Mauersberger, R., Wilson, T.L., Henkel, C. L13

Cosmology

Erratum: Early Brans-Dicke axisymmetric universe with magnetic field
Chakravarti, S.P., De, U.K. 407

Extragalactic astronomy

Optical and near-infrared observations of IRAS galaxies
Moorwood, A.F.M., Véron-Cetty, M.-P., Glass, I.S. 39

The relativistic maximum instability in astrophysical jets
Zaninetti, L. 135

(RN) The nature of the emission-line object S 103 near the LMC
Dennefeld, M. 199

Influence of the cluster environment of Seyfert galaxies
Nesci, R. 259

Two newly discovered OVV objects
Zhan, Y., Chen, J.S. 321

The infrared (*H*) surface brightness of galaxies as a function of the morphological type
Manousoyannaki, I., Chincarini, G. 331

(RN) Redshifts of galaxies in the south west region of the Perseus supercluster
Merighi, R., Focardi, P., Marano, B., Vettolani, G. 398

Erratum: Optical counterpart candidates of radio sources 1320–446, 1622–297, 1908–202, and 2106–413
Torres, C., Wroblewski, H. 406

Galactic structure and dynamics

Collective relaxation of stellar systems
Gurzadyan, V.G., Savvidy, G.K. 203

A method for integrating the equations that govern linear isentropic oscillations of an incompressible MacLaurin spheroid embedded in a spheroidal halo
Smeyers, P. 385

Stellar clusters and associations

Deep photometry of globular clusters. III. The globular cluster in Eridanus GLC 0423-21
Ortolani, S., Gratton, R.G. 25

Formation, structure and evolution of stars

Explosive hydrogen burning in novae
Wiescher, M., Görres, J., Thielemann, F.-K., Ritter, H. 56

Models of magnetic white dwarfs
Adam, D. 95

The brightest stars in galaxies: a theoretical simulation
Greggio, L. 111

A model for time-dependent turbulent convection
Kuhfuß, R. 116

Strange quark stars
Haensel, P., Zdunik, J.L., Schaeffer, R. 121

Exact solutions of the Lane-Emden equation in *N*-dimensional space
Horedt, G.P. 148

Absolute magnitudes and evolutionary status of Wolf-Rayet stars
Breysacher, J. 185

Four-colour photometry of eclipsing binaries. XXIA. Photometric analysis and apsidal motion study of V 346 Centauri
Giménez, A., Clausen, J.V., Andersen, J. 310

Phenomenology of the optical outbursts of the classical old-nova GK Persei (1901)
Bianchini, A., Sabbadin, F., Favero, G.C., Dalmeri, I. 367

(RN) *VBLUW* photometry of solar-type stars
Greve, A., van Genderen, A.M. 392

(RN) Mode-switching, nulling and drifting subpulses in PSR 1112+50
Wright, G.A.E., Sieber, W., Wolszczan, A. 402

Stellar atmospheres

Active regions on HR 1099 from a high resolution spectroscopic study of photospheric (Fe I) and chromospheric (Ca II and H α) lines
Gondoin, P. 73

Continuous and weak-line absorption by neutral iron in the solar atmosphere
Rudkjøbing, M. 132

Line formation in the comoving frame: accurate solution using an approximate Newton-Raphson operator
Hempe, K., Schönberg, K. 141

The magnetic field of Canopus. II
Weiss, W.W. 243

Chemical evolution of the Galaxy: a comparison of the abundances of light metals in disk and halo dwarfs
François, P. 264

Line formation in expanding atmospheres: multi-level calculations using approximate lambda operators
Hamann, W.-R. 347

SiO and H_2O maser emission in OH/IR objects and late-type variable stars
Nyman, L.-Å., Johansson, L.E.B., Booth, R.S. 352

Diffuse matter in space (including H II regions and planetary nebulae)

Hollow H II regions. I. Effects of stellar evolution and wind energy dissipation
Dorland, H., Montmerle, T., Doom, C. 1

The 4 μm spectra of compact infrared sources
Hofmann, R., Larson, H.P., Fink, U. 18

Statistical evolutionary properties of planetary nebulae: thicknesses of the nebulae and temperatures of the stars
Sabbadin, F. 31

Observations of the giant H II region complex W 51 at decameter wavelengths
Deshpande, A.A., Sastry, C.V. 129

Radio observations of CH in three dark nebulae and the correlation of CH with optical extinction and molecular hydrogen
Mattila, K. 157

Evidence for intrinsic polarization in the optical radiation of planetary nebulae
Leroy, J.L., Le Borgne, J.F., Arnaud, J. 171

New HC_7N cloudlets in Taurus
Cernicharo, J., Bachiller, R., Duvert, G. 181

An empirical study of ring-shaped nebulae in the Galaxy and in the LMC
Rosado, M. 211

Atomic hydrogen and helium densities of the interstellar medium measured in the vicinity of the Sun
Chassefière, E., Bertaux, J.L., Lallement, R., Kurt, V.G. 229

The Rosette nebula. III. Interstellar dust extinction and a model of the molecular cloud complex
Celnik, W.E. 287

Grain temperature fluctuations: a key to infrared spectra
Désert, F.X., Boulanger, F., Shore, S.N. 295

λ 1300 μm dust emission from giant molecular clouds close to the galactic center
Mezger, P.G., Chini, R., Kreysa, E. , Gemünd, H.-P. 324

Turbulent gas motions in giant H II regions. II. The luminosity-velocity dispersion relation
Hippelein, H.H. 374

The Sun

Lifetimes of umbral dots in sunspots
Kusoffsky, U., Lundstedt, H. 51

The solar rotation elements *i* and Ω derived from sunspot groups
Balthasar, H., Lustig, G., Stark, D., Wöhl, H. 277

Celestial mechanics and astrometry

Adelphic potentials
Bozis, G. 107

Astrometric observations of Saturn's satellites from ESO during the 1981 opposition. Comparison with theory (Text in French)
Dourneau, G., Veillet, C., Dulou, M.R., Le Campion, J.F. 280

Physical and chemical processes

Changes in stellar parameters implied by a neutron star corequake
Haensel, P., Zdunik, J.L., Schaeffer, R. 251

Chemical equilibrium from diffuse to dense clouds. II. Interstellar clouds in the Magellanic Clouds
Bel, N., Viala, Y.P., Guidi, I. 301

Cosmic-ray shock acceleration in oblique MHD shocks
Webb, G.M., Drury, L.O'C., Völk, H.J. 335

Instruments, data processing, and computational methods

(RN) Fast approximations for the $R_{II\text{-}A}$ redistribution function
Gouttebroze, P. 195